

JUN 23 1993

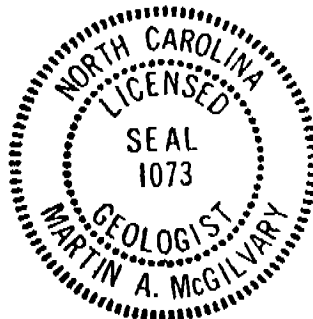
Winston-Salem
Regional Office

August 29, 1990

Report of Subsurface Investigation
Pantry
West Pine Street (Hwy. 89)
Mt. Airy, North Carolina

Prepared for:
Mr. Gary York
York Oil Company
P. O. Box 78
White Plains, North Carolina 27031

Prepared by:
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Martin A. McGilvary
(SEAL)

SUBSURFACE INVESTIGATION

At the request of Mr. Gary York, SPATCO Environmental initiated an investigation of The Pantry site located on West Pine Street (Hwy. 89) in Mount Airy, NC. As the property was currently the site of a Pantry convenience store and an underground storage tank and dispensing system was located on the property, the investigation for possible petroleum hydrocarbon contamination was conducted in conjunction with a real estate transaction involving the site.

On April 2, 1990 SPATCO Environmental personnel visited the site with a sub-contract drill rig and crew to auger five (5) soil borings. This report summarizes the field work completed on that date and laboratory results for the five (5) of the soil samples collected.

Enclosed are the following items:

Appendix I - A copy of the soil sample laboratory analyses for five (5) soil samples collected from the borings augered on April 1, 1990.

Appendix II - A chain of custody record verifying the soil samples were secure and at the proper temperature when delivered to the independent sub-contract laboratory.

Appendix III - Figure 1 - A general site sketch indicating soil boring locations.

Appendix IV - Boring logs for each of the five (5) borings constructed at the site.

SOIL SAMPLING PROCEDURES AND OVA EVALUATION

Soil samples were collected at approximately 5' intervals from each of the four (4) borings constructed on April 2, 1990 with a total of sixteen (16) individual soil samples collected from the site on that date. The locations of the borings were chosen to encounter the highest probability of hydrocarbon contamination. The subsurface materials encountered during the drilling process are shown on the enclosed boring logs for each boring (see Appendix IV). The drill rod and augers use in construction of the soil borings were steam

cleaned prior to and between each use. The splitspoon tube sampler was thoroughly decontaminated prior to each use by a soap and water rinse, tap water rinse, isopropyl alcohol rinse and a final rinse in distilled water. To minimize the risk of accidental contamination, new disposable latex gloves were worn during each transfer of soil from splitspoon to sample jar. The results of soil sample OVA evaluation are given in Table 1.

Table 1 - Soil sampling depths and OVA readings

SAMPLE #	DATE COLLECTED	DEPTH COLLECTED	OVA READING	SENT TO LAB
B-1-A	4-2-90	3.5-5.0 ft.	5 ppm*	No
B-1-B	4-2-90	8.5-10.0 ft.	1 ppm	No
B-1-C	4-2-90	13.5-15.0 ft.	ND**	Yes
Boring No. 1 terminated at 16.5 ft.				
SAMPLE #	DATE COLLECTED	DEPTH COLLECTED	OVA READING	SENT TO LAB
B-2-A	4-2-90	3.5-5.0 ft.	4 ppm	No
B-2-B	4-2-90	8.5-10.0 ft.	3 ppm	No
B-2-C	4-2-90	11.0 ft. ^o	3 ppm	No
B-2B-D	4-2-90	13.5-15.0 ft.	7 ppm	Yes
Boring No. 2 terminated at 16.5 ft. ^o Auger refusal at 11' due to rock; moved 5' aside, hand augered to 15' for sample.				
SAMPLE #	DATE COLLECTED	DEPTH COLLECTED	OVA READING	SENT TO LAB
B-3-A	4-2-90	3.5-5.0 ft.	4 ppm	No
B-3-B	4-2-90	8.5-10.0 ft.	7 ppm	No
B-3-C	4-2-90	13.5-15.0 ft.	2 ppm	Yes
Boring No. 3 terminated at 16.5 ft.				
SAMPLE #	DATE COLLECTED	DEPTH COLLECTED	OVA READING	SENT TO LAB
B-4-A	4-2-90	3.5-5.0 ft.	12 ppm	No
B-4-B	4-2-90	8.5-10.0 ft.	11 ppm	No
B-4-C	4-2-90	13.5-15.0 ft.▼	15 ppm	Yes

Boring No. 4 terminated at 16.5 ft. ▼ Water encountered.				
SAMPLE #	DATE COLLECTED	DEPTH COLLECTED	OVA READING	SENT TO LAB
B-5-A	4-2-90	3.5-5.0 ft.	ND	No
B-5-B	4-2-90	8.5-10.0 ft.	ND	No
B-5-C	4-2-90	13.5-15.0 ft.▼	ND	Yes
Boring No. 5 terminated at 16.5 ft. ▼ Water encountered.				

* ppm = parts per million

** ND = no detection with Organic Vapor Analyzer

LABORATORY ANALYSIS

Soil samples for laboratory analysis were immediately placed in a chilled cooler after collection, refrigerated while stored at SPATCO Environmental offices, and shipped to the subcontract laboratory in a chilled cooler. Five (5) of the soil samples collected were submitted to Law and Company Laboratories for analysis. Samples for analysis were chosen based upon their stratigraphic positions and OVA evaluation. All samples were analyzed for Total Petroleum Fuel Hydrocarbons (TPFH) - EPA Method 5030 GC. In addition, sample B-5-C was analyzed for Total Petroleum Hydrocarbons (TPH) - EPA Method 3550. The results of laboratory analyses are summarized in Table 2.

Table 2 - Results of laboratory analysis.

SAMPLE #	TPFH EPA Method 5030 (ppm)	TPH EPA Method 3550 (ppm)
B-1-C	ND*	NA**
B-2B-D	ND	NA
B-3-C	ND	NA
B-4-C	ND	NA
B-5-C	ND	ND

* ND = No detection at the specified detection limit.

Detection Limit: Total Petroleum Fuel Hydrocarbons - 10 ppm
Total Petroleum Hydrocarbons - 10 ppm
**NA = No analysis (This analysis not requested for this sample).

REGULATIONS AND COMMENTS

It is my understanding that the North Carolina Division of Environmental Management (NCDEM) currently requires remedial action be taken on soils that equal or exceed 10 ppm TPH or TPFH. However, soils that equal 10 ppm TPH or TPFH, but do not exceed 85 ppm TPH or TPFH, may not require remediation depending on site specific characteristics.

The soil sample laboratory results in Table 2 indicate that if contamination is present at this site, it is present in levels below those requiring remediation. No action is recommended at this site.

Based on OVA evaluation and the laboratory analyses performed on soil samples collected from the five (5) soil borings which were constructed adjacent to each tank basin area, vapor well monitoring appears to be a viable option as a leak detection method at this site.

This report is for your files. I regret the delay in forwarding a written copy of the report to you and hope it has not inconvenienced you in any way. If we can help you further in other matters, please do not hesitate to call.

/jh

LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

RECEIVED

APR 9 1990

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1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

919-762-7082 919-762-8785
FAX 919-762-8785

SOUTHERN PUMP AND TANK COMPANY
ENVIRONMENTAL DIVISION
556-L ARBOR HILL ROAD
KERNERSVILLE, N.C. 27284
ATTN: ALEX MCGILVARY

DATE RECEIVED: 4-04-90
DATE COLLECTED: 4-02-90
COLLECTED BY: CUSTOMER
LAB I.D. # EW 1893

W/O# 30602

SAMPLE DESCRIPTION: SOIL - PANTRY HWY 89

TESTS/SAMPLES	UNITS	(B-2B-D)				
		B-1-C	HB-2-D	B-3-C	B-4-C	B-5-C
TOTAL PETROLEUM FUEL HYDROCARBON	PPM	<10*	<10*	<10*	<10*	<10*
TOTAL PETROLEUM HYDROCARBON	PPM	---	---	---	---	<10*

EPA METHOD # 5030 GAS CHROMATOGRAPH (TPFH)

EPA METHOD # 3550 GAS CHROMATOGRAPH (TPH)

DETECTION LIMITS = 10 PPM

* BELOW DETECTION LIMITS

Dolly Bidman
LABORATORY DIRECTOR

336 L ARBOR HILL ROAD
KEARNERSVILLE, NORTH CAROLINA 27284
PHONE 919/996-0573

SOUTHERN PUMP & TANK COMPANY

SHAW Environmental

[illegible]

RECEIVED FOR LABORATORY BY:		DATE	TIME	AIRBEL NO.	OPENED BY:	DATE	TIME	TEMP °C	SEAL	CONDITION
Richard C. Smith		4/1/70	1435	770792361	Richard C. Smith	4/1/70	1435	20C	OK	Good
REMARKS:										

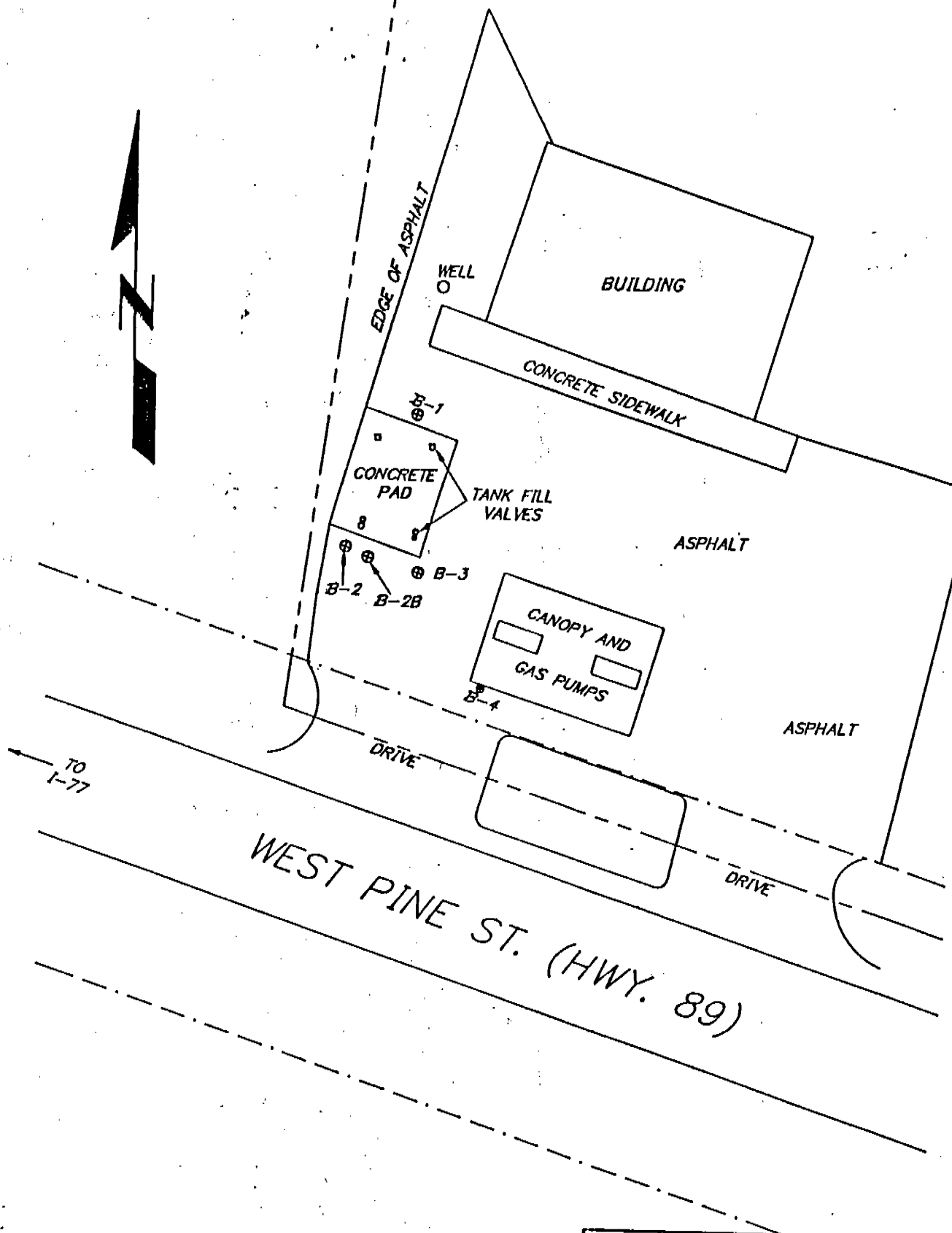


FIGURE 1 - GENERAL SITE SKETCH INDICATING SOIL BORING LOCATIONS.

• SOIL BORING LOCATIONS & NUMBER

SCALE: 1" = 30'

SPATCO environmental

YORK OIL CO.
PANTRY
HWY. 89 W.

MT. AIRY, N.C.

DATE: JULY 26, 1990
DRAWN BY: T.S.B.

Boring # B-4

Method: Hammer adv. ____, Thru auger X, Rotary ____, Split Spoon X, Shelby Tube ____
Static water level _____

[illegible]

GROUNDWATER PROTECTION, INC.
LOG OF BORING

Location The Pantry (Hwy. 89)

Mt. Airy, NC

Spatco-Kernersville

Project #

Driller Mike McConahey

Drill Crew Phil, Butch

Boring Date 4-2-90

Boring # B-1

Method: Hammer adv. __, Thru auger X, Rotary __, Split Spoon X, Shelby Tube __
Static water level

Static water level _____

[illegible]

GROUNDWATER PROTECTION, INC.
LOG OF BORING

Location The Pantry (Hwy. 89)

Mt. Airy, NC

Client Spatco-Kernersville

Project #

Driller Mike McConahey

Drill Crew Butch, Phil

Boring Date ~~4-2-90~~

Boring # B-2

Method: Hammer adv. ____, Thru auger X, Rotary ____, Split Spoon X, Shelby Tube ____
Static water level _____

[illegible]

[illegible]

Location The Pantry (Hwy. 89)

Driller Mike McConahey

Drill Crew Phil, Butch

Boring Date 4-2-90

Boring # HA-1 (B-2B)

Method: Hammer adv. ____, Hand auger X, Rotary ____, Split Spoon X, Shelby Tube ____
Static water level

BORING TERMINATED AT 16.5 FEET.